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(71) Applicant(s)
Nippon Steel Corporation

(Incorporated in Japan)

6-3 Otemachi 2-chome, Chiyoda-ku, Tokyo 100-71,
Japan

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AA60Y AA605 AA607 AA61Y AA623 AA625 AA627
AA629 AA67X AA670 AA671 AA673 AA675 AA677
AA679 AA68X AA681 AA683 AA685 AA687 AA688
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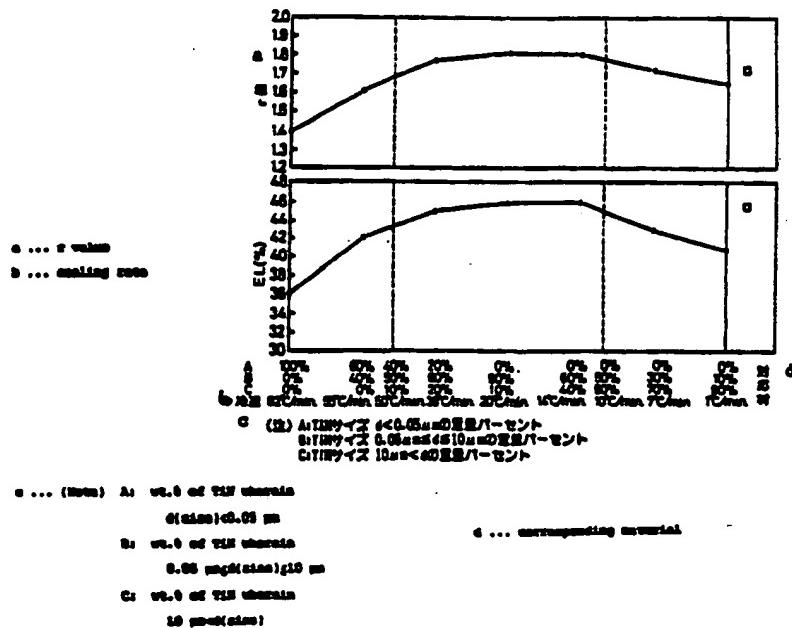
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(58) Field of Search by ISA

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(54) Cold-rolled steel sheet having excellent workability and process for producing the same

(57) A cold-rolled steel sheet having excellent cold workability in spite of its having a high nitrogen content for the purpose of recycling scrap iron. The sheet contains at most 0.1 % of carbon, 60 - 150 ppm of nitrogen, at most 0.4 % of manganese, at most 0.030 % of sulfur (provided Mn/S > 7), at most 0.1 % of aluminum and at most 0.08 % of titanium (provided N (%) - Ti/3.42 (%) ≤ 0.007), and at least one half by weight of TiN which is a size of 0.05 - 10 µm. When it is produced through continuous annealing, the condition of N (%) - Ti/3.42 (%) ≤ 0.004 % must be satisfied and it is further necessary to conduct high-temperature winding in the hot rolling step or to add boron. When it is produced through box annealing, the condition of 0.002 % ≤ N (%) - Ti/3.42 (%) ≤ 0.007 % must be satisfied and it is further necessary to somewhat raise the slab heating temperature in the hot rolling step and lower the winding temperature in this step.



GB 2 289 057

(71) cont

Japan Casting & Forging Corporation

(Incorporated in Japan)

7-15 Kudanminami 4-chome, Chiyoda-ku, Tokyo 102, Japan

(72) Inventor(s)

Hisayoshi Yatoh

Yasuhiko Yamashita

Takashi Harabuchi

Seinosuke Yano

(74) Agent and/or Address for Service

Reddie & Grose

18 Theobalds Road, LONDON, WC1X 8PL,

United Kingdom